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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,617	05/08/2006	Kazumari Kobayashi	290768US2PCT	3715
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
DAVIS, PATRICIA A				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
08/14/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/578,617

Applicant(s)

KOBAYASHI ET AL.

Examiner

PATRICIA DAVIS

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 2-10 and 16-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Applicant's amendment filed on June 16, 2009 was received. Claims 2-10 were cancelled. Claim 1 was amended. Claims 11-17 were added.

Election/Restrictions

2. Newly submitted claims 16 and 17 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The subject matter of aforementioned claims is a method of manufacturing a zinc sheet or zinc can for a battery anode and a method of manufacturing a manganese dry battery classified in class 29, subclass 623.1, which is distinct from the "active material for a battery anode" as recited in the original claims.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16 and 17 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

3. The claim rejection under 35 U.S.C. 102(b) as being clearly anticipated by Hikata on claims 1 and 11-14 are maintained.

Regarding claim 1, Hikata teaches an active material for a battery anode, the material is made of zinc and virtually contains no lead (see paragraphs 0001 and 0010).

Hikata further discloses the active material consists of zinc for the major substance with 0.01-0.07 percent mass of bismuth (1000 ppm or 0.1%) (see par. 0010 and Table 2, line 74). Bracket 3 is considered optional because of the "or" statement in the claim.

Regarding claim 11, Hikata teaches the active material having a concentration of 99.99% or more of zinc metal (see paragraph 0010).

Regarding claim 12, Hikata teaches an active material for a battery anode, the material is made of zinc and virtually contains no lead (see paragraphs 0001 and 0010).

Although, Hikata does not specifically teach that the disclosed material exhibits the recited change in weight due to corrosion upon exposure to the electrolyte solution as claimed. However, regarding composition claims, if the composition is the same, it must have the same properties (see MPEP § 2112.01, II.). Consequently, as Hikata teaches the same material composition, it is inherently anticipated that the active material for the battery anode would exhibit the same properties as recited in the claim.

Regarding claims 13 and 14, Hikata teaches a method of manufacturing a manganese dry battery with use of an anode zinc plate which is processed from an anode active material sheet in a temperature in a range of 120-210 degree Centigrade (180-220 degree Centigrade) where the material contains zinc and the addition of bismuth (see pars. 0006 and 0013; Table 2, line 74; and claim 1).
are maintained.

4. The claim rejections under 35 U.S.C. 102(b) as anticipated by Hikata et al. on claims 2-10 are withdrawn, because claims 2-10 have been cancelled.

Regarding claim 1, Hikata teaches an active material for a battery anode, the material is made of zinc and virtually contains no lead (see paragraphs 0001 and 0010). Hikata further discloses the active material consists of zinc for the major substance with 0.01-0.07 percent mass of bismuth (1000 ppm or 0.1%) (see par. 0010 and Table 2, line 74). Bracket 3 is considered optional because of the "or" statement in the claim.

Regarding claim 11, Hikata teaches the active material having a concentration of 99.99% or more of zinc metal (see paragraph 0010).

Regarding claim 12, Hikata teaches an active material for a battery anode, the material is made of zinc and virtually contains no lead (see paragraphs 0001 and 0010).

Although, Hikata does not specifically teach that the disclosed material exhibits the recited change in weight due to corrosion upon exposure to the electrolyte solution as claimed. However, regarding composition claims, if the composition is the same, it must have the same properties (see MPEP § 2112.01, II.). Consequently, as Hikata teaches the same material composition, it is inherently anticipated that the active material for the battery anode would exhibit the same properties as recited in the claim.

Regarding claims 13 and 14, Hikata teaches a method of manufacturing a manganese dry battery with use of an anode zinc plate which is processed from an anode active material sheet in a temperature in a range of 120-210 degree Centigrade (180-220 degree Centigrade) where the material contains zinc and the addition of bismuth (see pars. 0006 and 0013; Table 2, line 74; and claim 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable by Hikata.

Regarding claim 15, Hikata does not specifically teach the metallographic grain size ratio.

However, the active material particle size can be optimized for the surface area of the reaction. The discovery of an optimum value of a known result effective variable, without producing any new or unexpected results, is within the ambit of a person of ordinary skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980) (see MPEP § 2144.05, II.).

Therefore, it would be obvious to one with ordinary skill in the art to optimize the metallographic grain sizes in the manganese dry battery.

Response to Arguments

7. Applicant's arguments filed on June 16, 2009 have been fully considered but they are not persuasive.

Applicant's principal argument is that Hikata does not teach 0.01 to 0.7 % by mass of bismuth.

In response to Applicant's arguments, please consider the following comments.

The amended claim 1 still reads on the invention by Hikata et al. because as shown in Table 2, line 74, bismuth is 1000 ppm, which is 0/1%.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA DAVIS whose telephone number is (571)270-7868. The examiner can normally be reached on 7:30am-5pm EST. Monday-Friday, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PATRICIA DAVIS/
Examiner, Art Unit 1795

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/Dah-Wei D. Yuan/

Supervisory Patent Examiner, Art Unit 1795